2007 Regional Comprehensive Plan / Regional Transportation Plan White Paper

Security and Emergency Preparedness

August 21, 2007

DRAFT

I - Introduction

The Southern California Association of Governments has identified several strategy areas to be developed as part of the 2007 Regional Comprehensive Plan and Regional Transportation Plan (RTP). This white paper is intended to stimulate discussion and to gather input.

II. Objectives for 2007 RTP

The continued emphasis on enhancing transportation security is reflected in the most recent transportation authorization bill, the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), signed into law on August 10, 2005. SAFETEA-LU, which authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period from 2005-2009, specifies that Metropolitan Planning Organizations (MPO) such as the Southern California Association of Governments (SCAG) shall develop a metropolitan planning process that provides consideration for projects and strategies that will "increase the security of the transportation system for motorized and non-motorized users."

In addition, in February 2007, the Federal Highways Administration released a Final Rule related to its interpretation of SAFETEA-LU, noting that the metropolitan transportation planning process should be consistent with the Strategic Highway Safety Plan, and other transit safety and security planning and review processes, plans, and programs, as appropriate.

SCAG, the federally designated Metropolitan Planning Organization for the southern California region that encompasses Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties - is developing a security component for the 2007 Regional Comprehensive Plan and Regional Transportation Plan.

III. Background

Southern California is home to significant threats; including earthquakes, wildfires, flooding and mudslides. More recently, terrorism has been added to the threats that the region must prepare against. The unexpected and complex nature of these natural and human-caused incidents require extensive coordination, collaboration and flexibility among all of the agencies and organizations involved in planning, mitigation, response and recovery.

The interdependency of the jurisdictions and organizations makes regional cooperation and coordination essential to security and emergency preparedness. No significant event is truly local, as political boundaries are permeable and critical local infrastructure may serve the entire region. No jurisdiction stands alone. A high-risk, well-resourced municipality may be as dependent on a smaller jurisdiction for support in an emergency as a smaller jurisdiction may be on a larger one.

Also, the complexity of the SCAG region, with a range of potential terrorism targets, presents significant challenges in coordinating and implementing effective domestic security programs.
It is important to differentiate between safety and security. For the purposes of this paper, the following definitions are used:

- **Safety** is defined as the protection of persons and property from unintentional damage or destruction caused by accidental or natural events.
- **Security** is defined as the protection of persons or property from intentional damage or destruction caused by vandalism, criminal activity or terrorist attacks.[1]

The Regional Preparedness Goal can be stated as "to achieve and sustain risk-based target levels of capability to prevent, protect against, respond to, and recover from major human-caused or natural events in order to minimize the threat and impact to lives, property and the regional economy."

The Transportation Research Board has classified emergency events that affect transportation agencies into several categories, listed below:

Emergency Events Impacting Transportation Agencies:[2]

Naturally Occurring	Human Caused	
	Intentional	Non-Intentional
• Droughts • Dust/Wind Storms • Earthquakes • Electrical Storms • Floods • High Winds • Hurricanes • Ice Storms • Landslides • Naturally Occurring Epidemics • Snowstorms and Blizzards • Tornadoes • Tropical Storms • Tsunamis • Wildfires	• Bomb Threats and Other Threats of Violence • Disruption of Supply Sources • Fire/Arson • Fraud/Embezzlement • Labor Disputes/Strikes • Misuse of Resources • Riot/Civil Disorder • Sabotage: External and Internal Actors • Security Breaches • Terrorist Assaults Using Chemical, Biological, Radiological, or Nuclear Agents • Terrorist Assaults Using Explosives, Firearms, or Conventional Weapons • Theft • Vandalism • War • Workplace Violence • Cyber Attacks	• Accidental Contamination or Hazardous Materials Spills • Accidental Damage to or Destruction of Physical Plant and Assets • Accidents That Affect the Transportation System • Gas Outages • Human Errors • HVAC System Failures or Malfunctions • Inappropriate Training on Emergency Procedures • Power Outages • Software/Hardware Failures or Malfunctions • Unavailability of Key Personnel • Uninterruptible Power Supply (UPS) Failure or Malfunction • Voice and Data Telecommunications Failures or Malfunctions • Water Outages

When a disaster occurs, there is a cascading effect on the transportation, utilities, communications, fuel, and water infrastructure services and delivery systems that we depend. When one of these critical elements in our support system breaks down, it has a domino effect on other elements. When multiple elements break down, the effect can be crippling. Some of the ways in which the infrastructure can be affected in a disaster or emergency are shown in the tables below.[3]

[1] National Cooperative Highway Research Program Report 525 Volume 3, "Incorporating Security into the Transportation Planning Process" Daniel Dornan and M. Patricia Maier, 2005
[2] National Cooperative Highway Research Program Report 525 Volume 9 "Guidelines for Transportation Emergency Training Exercises" McCormick Taylor Inc. 2006
[3] Federal Emergency Management Agency: **Community Emergency Response Team (IG-317)** ***Student's Guide***

Possible Effects Of Damage To The Infrastructure	
Service	***Effect***
Transportation	• Inability to get emergency service personnel into the affected area. • Inability to transport victims away from the area.
Electrical	• Increased risk of fire and electrical shock. • Possible disruption to transportation system if downed lines are across roads.
Telephone	• Lost contact between victims, service providers, and family members. • System overload due to calls from or to friends or relatives.
Water	• Disruption of service to homes, businesses, and medical providers. • Inadequate water supply for firefighting. • Increased risk to public health if there is extensive damage to the water supply or if it becomes contaminated.
Fuel Supplies	• Increased risk of fire or explosion from ruptured fuel lines. • Risk of asphyxiation from natural gas leaks in confined areas.

Each instance of infrastructure damage may severely restrict the abilities of emergency responders to provide service following a disaster. Some types of damage and their effects on emergency services include:

Possible Effects Of Damage On Emergency Service Providers	
Type Of Damage	***Effect On Emergency Services***
Roadways, Bridges, Tunnels, Interchanges	• Inability to assess damage accurately. • Ambulances prevented from reaching victims and/or victims prevented from reaching emergency medical services. • Police prevented from reaching areas of civil unrest. • Fire departments prevented from getting to fires. • Flow of needed supplies is interrupted. • Inability to deploy assets as part of incident response and to manage transportation flows • Inability for emergency service providers to manage an evacuation
Structural	• Damaged hospitals unable to receive patients. • Increased risk of damage from falling debris.
Disrupted Communication	• Victims unable to call for help. • Coordination of services is hampered. • Inability for incident command structure to receive real time situational information, reducing its effectiveness
Fuel Line Damage	• Fire and paramedic services overburdened. • Inability to sustain emergency response and recovery
Disrupted Water Service	• Firefighting capabilities restricted. • Medical facilities hampered.

A continuing, cooperative and collective regional effort will be needed to assist the region in the planning, preparation and response to emergencies, whether caused by natural or human elements. To assist in this effort, this chapter identifies SCAG's potential role and responsibility in regards to the relationship between transportation and emergency preparedness. It describes the current programs at the Federal, State and local levels; identifies security issues in the transportation infrastructure; and presents policy recommendations and actions for consideration by the SCAG Regional Council.

III. Current Conditions

Typically, no single agency is responsible for regional transportation security. At the local level, especially within transit agencies, safety may be handled within one office. However, it is far less likely that the security of a surface transportation mode is managed by one entity and that this entity is even controlled by the transportation organization. For example, highways and transit networks traverse multiple police jurisdictions, local fire departments generally fill the incident command role after terrorist events, regional command and control centers respond to both natural and intentional disasters, and federal agencies intervene as needed and based on specific guidelines such as the crossing of state boundaries.[4]

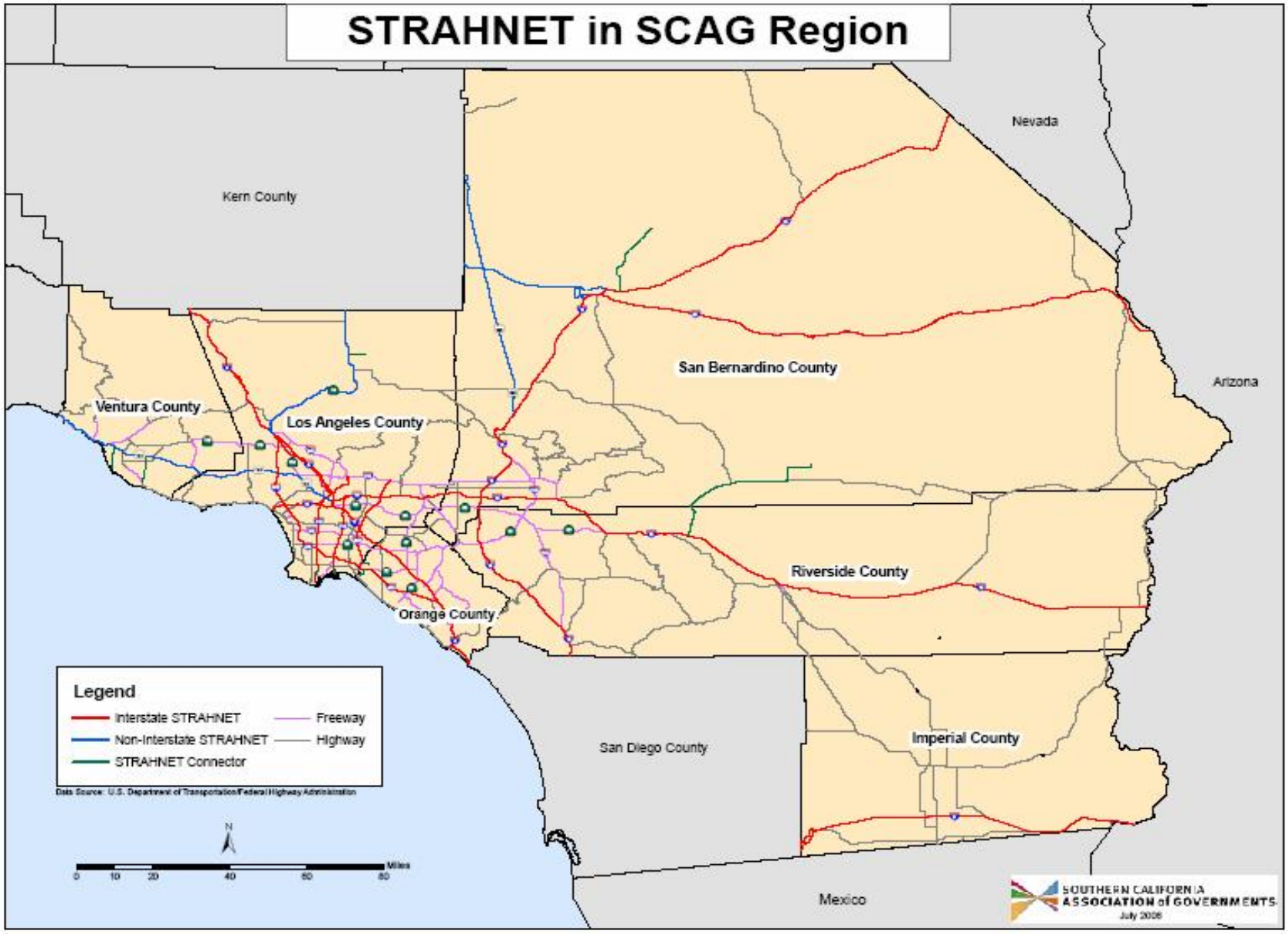
A number of plans, programs, organizations and infrastructure are in place within the SCAG region to provide safety and security of the regional transportation system for many potential situations. The following sections provide an overall summary of efforts to maintain and increase the safety and security of the region.

Strategic Highway Network

The Strategic Highway Network (STRAHNET) routes within the SCAG region are essential to readily accommodate the movement of military supplies and personnel in times of national emergency. STRAHNET routes were selected by the federal government, and include the National Interstate system, as well as key "non-interstate" routes and connectors to ports and military installations.

SCAG, through its planning processes, identifies the operation and maintenance needs of the interstate and state highway system within its jurisdiction, including STRAHNET. Within the SCAG region, all interstates are part of the STRAHNET. Also, SR-14, SR-101 and Route 395 are part of the non-interstate STRAHNET routes. Various connectors between the ports as well as various military installations and STRAHNET are also included. An unclassified visual representation of the STRAHNET within the SCAG region follows on the next page.

[4] National Cooperative Highway Research Project 525 Vol. 3 Transportation Planning Process , Page 16.


STRAHNET in SCAG Region
Nevada
Kern County
San Bernardino County
Arizona
Ventura County
Los Angeles County
Riverside County
Orange County
San Diego County
Imperial County
Mexico
Legend
Interstate STRAHNET
Non-Interstate STRAHNET
STRAHNET Connector
Freeway
Highway
Data Source: U.S. Department of Transportation/Federal Highway Administration
N
0 10 20 40 60 80
Miles
SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS
July 2008

California Critical Needs Assessments

There have also been several assessments of the critical state transportation infrastructure, which include identification of the key transportation facilities. Assessments have been conducted by the following bodies:

- The Governor's Office of Emergency Services
- The California Attorney General's Office
- The California Highway Patrol (CHP) conducted a vulnerability assessment of the State's highway system and has issued a confidential report to the State Legislature

The results of these assessments have been shared with the transportation system operators and incorporated into their security planning. However, security considerations have precluded the inclusion or discussion of these critical system elements in public documents.

United States Department of Defense

The Department of Defense (DOD) has several installations within the SCAG region. In the case of a large scale emergency, the DOD is authorized to provide resources when response and recovery requirements are beyond the capabilities of civilian authorities, and these efforts do not interfere with the DOD's core mission or ability to respond to operational contingencies.

Requests for Defense Support to Civilian Authorities (DSCA) are made through the local, county and State authorities as a request for assistance to the federal coordinating official in the appropriate lead federal agency and is normally accompanied by, or submitted after a request from the Governor for a disaster declaration from the President. The Defense Coordinating Officer coordinates the DOD resources to be provided. The California National Guard may be activated as part of the DSCA and can provide law enforcement support, crisis management and consequence management services. Activation of the National Guard for local support during emergencies is done by the Governor via the California Office of Emergency Services.[5]

International Border Crossings

Within the SCAG region, there are three international ports of entry along the Mexico-Imperial County border; Two at Calexico (Calexico and Calexico-East), and; One at Andrade (near Yuma, Arizona). Traffic from these ports enters California on the I-8 corridor. U.S. Customs and the Border Protection Agency within DHS are charged with the management and control of the official ports of entry. Security planning includes local emergency services as well as the CHP.

Caltrans District 11 has initiated the development of a Border Master Plan, to establish a process to institutionalize dialogue among local, state and federal stakeholders in the United States and Mexico. A key objective is to develop criteria that can be used in future studies to coordinate and

[5] San Diego Association of Governments, *2007 Regional Transportation Plan White Paper: Public Safety and Homeland Security*, July 21, 2006.

prioritize projects related to existing and new Ports of Entry (POEs) as well as roads leading to the California Mexico POEs.

The projects will consider operational improvements, design and retrofitting of border crossings, and roadway improvements designed to ease congestion at border crossings. Security is a consideration in the development of the Border Master Plan.

Seaports

The Department of Homeland Security (DHS) has designated the seaports of Long Beach and Los Angeles and Port Hueneme as at risk for potential terrorist actions[6]. Security at the ports is the joint responsibility of the U.S. Coast Guard, the U.S. Customs and Border Protection Agency, federal and state Homeland Security offices, Port police agencies, Harbor Patrols and emergency service agencies. The U.S. Coast Guard leads the local Area Maritime Security Commission which coordinates activities and resources for all port stakeholders.

The Port of Los Angeles is unique in that it has a dedicated police force, the Los Angeles Port Police, to patrol the area within the jurisdiction of the Port of Los Angeles. The Port Police enforces federal, state and local public safety statutes as well as environmental and maritime safety regulations in order to maintain the free flow of commerce and produce a safe, secure environment that promotes uninterrupted Port operations. In addition, the Port Police partners with other law enforcement agencies such as the Los Angeles Police Department, California Highway Patrol, and Customs and Border Protection in the Cargo Theft Interdiction Program (CTIP), which investigates cargo theft, and the High Intensity Drug Trafficking Area, which targets drug trafficking at the Ports of Los Angeles and Long Beach. Furthermore, per the Maritime Transportation Security Act of 2002, the Port of Los Angeles works with the Coast Guard to develop security plans for facilities at the port.

Similar to the Port of Los Angeles, security at the Port of Long Beach entails physical security enhancements, police patrols, coordination with federal, state, and local agencies to develop security plans for the port area and investigate suspicious incidents, and obtaining federal funding to pay for these enhancements. As with the Port of Los Angeles, the Port of Long Beach works with the Coast Guard to develop security plans for facilities at the port.

In contrast to the Port of Los Angeles, however, the Port of Long Beach does not have its own dedicated police force. Instead, the Long Beach Police Department is responsible for patrolling the port area. In doing so, the Port reimburses the Long Beach Police and Fire Departments for their port-related activities and expenses. The Port also funds its own Harbor Patrol to supplement law enforcement work conducted by other agencies such as the Coast Guard.

In addition, several programs are in place to effectively monitor and screen seaport cargo. They include:

- Investigations: The federal Container Security Initiative (CSI) directs Customs agents, working with host governments, to inspect and examine all cargo containers deemed high-risk before they are loaded on U.S.-bound vessels. The CSI contains four core

[6] Fiscal Year 2006 Infrastructure Protection Program. U.S. Department of Homeland Security, September 25, 2006.

elements: Identifying high-risk containers; pre-screening containers before they reach U.S. ports of entry; using technology to pre-screen high-risk containers; developing and using smart and secure containers.

- Inspections: The 24-hour rule requires manifest information on cargo containers to be delivered to U.S. Customs 24 hours before the container is loaded onto a vessel in a foreign port. Customs has the right to stop any container from being loaded, for any reason, while the container is still overseas.
- Partnerships: Most of the largest U.S. importers and their trading partners participate in the Customs-Trade Partnership Against Terrorism (C-TPAT), a public-private partnership designed to improve security standards throughout the cargo supply chain.
- Technology: U.S. Customs uses X-ray, gamma ray and radiation-detection devices to screen incoming cargo at U.S. ports.

Airports

Airport security planning is the joint responsibility of the federal Transportation Security Administration (TSA), the airlines and the individual airports. There are ten airports in the SCAG region offering commercial service, and two offering commuter service. In addition, over 50 general aviation airports in the region are available for public use, including some of the most active general aviation airports in the country. Airports in the SCAG region have upgraded their security systems since 9/11 using a variety of strategies in conjunction with local, state and federal law enforcement.

In addition, airports serve a vital role in recovery efforts. Airports can serve as evacuation centers, and if in working order after an incident, can serve as staging centers for relief efforts. Large flat areas at airports provide excellent staging areas for supplies and equipment, including helicopters.

California Department of Transportation

Caltrans, in conjunction with the California Highway Patrol (CHP), has created Transportation Management Centers (TMCs) to rapidly detect and respond to incidents while managing the resulting congestion.

With the help of intelligent transportation system technologies such as electronic sensors in the pavement, freeway call boxes, video cameras, ramp meter sensors, earthquake monitors, motorist cellular calls, and commercial traffic reports; as well as Caltrans highway crews, 9-1-1 calls and officers on patrol. The TMC provides coordinated transportation management for general commutes, special events and incidents affecting traffic.

The TMCs are operated within each Caltrans district. For the SCAG region, Districts 7, 8, 11 and 12 all have TMCs.

California Office of Emergency Services

Domestic security at the state government level in California is primarily handled by the Governor's Office of Emergency Services (OES). As described by the Office of Emergency Services, the role of OES is to 'coordinate overall state agency responses to major disasters in support of local government. The office is responsible for assuring the State's readiness to respond to and recover from natural, manmade, and war-caused emergencies, and for assisting local governments in their emergency preparedness, response and recovery efforts. The OES serves as the central contact point in the state for any emergency or imminent disaster. It coordinates the notification of appropriate state administering agencies that may be required to respond, as well as the emergency activities of all state agencies in the event of an emergency.

In doing so, the OES does not focus on security specifically, but rather more broadly on addressing all potential incidents that could impact the state, such as earthquakes, fires, floods, and terrorist attacks. Furthermore, OES coordinates with federal agencies such as the Department of Homeland Security and Federal Emergency Management Agency, as well as other state and local agencies such as the California Highway Patrol.

In May 2005, the OES released the 2005-2010 Statewide Emergency Management Strategic Plan, which outlines California's vision, mission, principles for emergency management, as well as goals and objectives for the period of 2005-2010. In addition to the strategic plan, OES has released a local planning guide on terrorism, which provides guidance to local cities in planning for potential terrorist acts.

The OES is required to develop model guidelines for local government agencies and community based organizations to develop a (voluntary) disaster registry program for long-term and community health facilities and for individuals that are disabled or elderly. Individuals registered in the program should be prepared to be self-sufficient for at least 72 hours.[7]

Multi-Hazard Mitigation Plans

Mitigating hazards before the occurrence of a disaster is the primary step in preparing for emergencies, rather than the final step of recovery. The goal of hazard mitigation plans is to guide implementation activities in order to achieve the greatest reduction of vulnerability, which will result in saved lives, reduced injuries, reduced property damages, and greater protection of the environment.

FEMA is now requiring state and local governments to develop hazard mitigation plans. The Disaster Mitigation Act of 2000 (DMA 2000), Section 322 (a-d) requires that local governments, as a condition of receiving federal disaster mitigation funds, have a mitigation plan that describes the process for identifying hazards, risks and vulnerabilities; identifies and prioritizes mitigation actions; encourages the development of local mitigation, and provides technical support for those efforts. "Local Governments" are defined in the DMA 2000 to typically include counties, local municipalities, and tribal governments; but can also include

[7] http://www.oes.ca.gov/Operational/OESHome.nsf/LevelTwoWithNav?OpenForm&Key=Laws+And+Regulation

other local agencies and organizations, including Councils of Governments, schools and other special districts.

California is currently in the process of updating its *State of California Multi Hazard Mitigation Plan*. The State is required to adopt a federally-approved State Multi-Hazard Mitigation Plan to be eligible for certain disaster assistance and mitigation funding. The Plan is an evaluation the hazards California faces and the strategies, goals, and activities the state will pursue to address these hazards. The Plan:

- Documents statewide hazard mitigation planning in California
- Describes strategies and priorities for future mitigation activities
- Facilitates the integration of local and tribal hazard mitigation planning activities into statewide efforts
- Meets state and federal statutory and regulatory requirements
- Is an annex to the State Emergency Plan.[8]

All six SCAG counties and a number of cities within the SCAG region have completed Hazard Mitigation Plans. OES dictates that these plans must be updated every three years.

County Offices of Emergency Services

Counties and cities are the first responders to any security or emergency situation. These responders include fire departments, police and sheriff department, hospitals, ambulance services and transportation agencies. Coordination among public and private agencies within various cities and counties make the most use of all available resources in the event of any emergency.

While each city and county has their own security procedures, the policies are generally similar. Mutual Aid agreements between cities, counties and private organizations help to maximize resources and reduce the human suffering associated with disaster situations. Each SCAG county has a department in charge of security and emergency response:

County	Office Information	County	Office Information
Imperial	Office of Emergency Services 1078 Dogwood Road Heber, CA 92249 760.482.2400	Riverside	Office of Emergency Services 4080 Lemon Street, Suite 8 P.O. Box 1412 Riverside, CA 92502-1412 951.955.4700
Los Angeles	Office of Emergency Management 1275 N. Eastern Ave. Los Angeles, CA 90063 323.980.2261	San Bernardino	Office of Emergency Services 1743 W. Miro Way Rialto, CA 92376 909.356.3998
Orange	Office of Emergency Services 2644 Santiago Canyon Road Silverado, CA 92676 714.628.7055	Ventura	Office of Emergency Services 800 South Victoria Ave. Ventura, CA 93009 805.654.2551

[8] State of California Multi Hazard Mitigation Plan (2004)

National Incident Management System / Standardized Emergency Management System

The National Incident Management System (NIMS) is a tool for states, counties and local jurisdictions to respond to catastrophic events through better communication and coordination.

> *NIMS provides a consistent nationwide template to enable Federal, State, local, and tribal governments and private-sector and nongovernmental organizations to work together effectively and efficiently to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or complexity, including acts of catastrophic terrorism.* [9]

California has a similar management system called the Standard Emergency Management System (SEMS) which is mandated under California Government Code Section §8607(a). State of California Executive Order S-2-05 requires the state to integrate, to the extent appropriate, the NIMS, into the State's Standardized Emergency Management System (SEMS).[10]

The NIMS Integration Center strongly recommends that all elected officials who will be interacting with multiple jurisdictions and agencies during an emergency incident to take several NIMS courses, at a minimum:

- FEMA IS-700: NIMS, an Introduction[11]
- ICS-100: Introduction to Incident Command System (ICS)[12] or equivalent

(Note: FEMA IS-700 "NIMS, and Introduction" and ICS-100 are used extensively in the development of this section)

All federal, state, local, tribal, private sector and non-governmental personnel with a direct role in emergency management and response must be NIMS and ICS trained. This includes all emergency service related disciplines such as Emergency Medical Technicians, hospitals, public health, fire service, law enforcement, public works/utilities, skilled support personnel, and other emergency management response, support and volunteer personnel.

The NIMS employs two levels of incident management, depending upon the type of incident.

- The **Incident Command System (ICS)** is a standard, on scene, all-hazard incident management system. ICS allows users to adopt an integrated organizational structure to match the needs of single or multiple incidents.
- **Multi-Agency Coordination Systems** are a combination of facilities, equipment, personnel, procedures and communications integrated into a common framework for coordinating and supporting incident management.

[9] http://www.fema.gov/pdf/nims/NIMS_basic_introduction_and_overview.pdf
[10] http://gov.ca.gov/index.php/executive-order/2000/
[11] http://www.training.fema.gov/emiweb/is/is700.asp
[12] http://www.training.fema.gov/EMIWEB/is/is100.asp

ICS has been in use for over 30 years and is used for planned events, fires, earthquakes, hurricanes and acts of terrorism; etc. ICS helps all responders communicate and effectuate logistics.

NIMS requires all emergency plans and standard operating procedures to incorporate NIMS components, principles and policies; include emergency planning, training, response, exercises, equipment, evaluation, and corrective actions. Chief elected and appointed officials in a community need to be directly involved in these NIMS preparedness elements, especially the elements that deal with exercising community emergency management policies, plans, procedures and resources.

Jurisdictions will be required to meet the FY 2006 NIMS implementation requirements as a condition of receiving federal preparedness funding assistance in FY 2007. However, it is important to recognize that the NIMS is a dynamic system, and the doctrine as well as the implementation requirements will continue to evolve as emergency management capabilities change.

Mutual Aid Agreements (MAA)

Immediately following the 1994 Northridge earthquake, city and county emergency managers in the Governor's Office of Emergency Services (OES) Coastal, Southern, and Inland Regions developed a coordinated emergency management concept called the Emergency Managers Mutual Aid (EMMA) system. EMMA provided a valuable service in the emergency response and recovery efforts at the Southern Regional Emergency Operations Center (REOC), local Emergency Operations Centers (EOCs), the Disaster Field Office (DFO), and community service centers.

The purpose of Emergency Managers Mutual Aid (EMMA) is to support disaster operations in affected jurisdictions by providing professional emergency management personnel.

In accordance with the Master Mutual Aid Agreement, local and state emergency managers have responded in support of each other under a variety of plans and procedures.

The objectives of the EMMA Plan include:

1) Providing emergency management personnel from unaffected areas to support local jurisdictions, Operational Areas, and regional emergency operations during proclaimed emergencies.
2) Providing a system, including an organization, information, and forms necessary to coordinate the formal request, reception, assignment, and training of assigned personnel.
3) Establishing a structure to maintain this document (the Emergency Managers Mutual Aid Plan) and its procedures.
4) Providing for the coordination of training for emergency managers, including Standardized Emergency Management System (SEMS/NIMS) training, emergency management course work, exercises, and disaster response procedures.
5) Promoting professionalism in emergency management.[13]

[13] http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/Emergency Managers Mutual Aid Plan/$file/Emma.pdf

Rail and Mass Transit Security

Rail and mass transit systems have long been an attractive target for terrorists and criminals. According to a RAND Corporation database of worldwide terrorist incidents, between 1995 and June 2005, there were over 250 terrorist attacks worldwide against rail targets, resulting in almost 900 deaths and over 6,000 injuries (excluding the 2005 London attacks).[14] One of these attacks occurred near Hyder, Arizona, where an Amtrak train carrying 300 passengers was intentionally derailed in October, 1995. One person died and 78 were injured.

Since the early 1990s, the California Public Utilities Commission has required that transit agencies operating rail systems prepare a comprehensive System Safety Program Plan (SSPP) that also included a security component.

At the time of the 2004 RTP, all transit agencies had a security and emergency management plan, which detailed how the agency would coordinate with first responder (law enforcement and fire) agencies, their respective County Office of Emergency Services and the statewide Standardized Emergency Management System (SEMS).

Transit agencies that apply for DHS Transit Security Grants Program (TSGP) funds are required to develop a regional transit security strategy. Several transit agencies within the SCAG region have worked together to develop a regional transit security strategy. A recent rule from the FHWA/FTA requires Metropolitan Planning Organizations, such as SCAG, to be consistent with transit safety and security planning and to review processes, plans and programs, as appropriate.

Regional Transportation Security Study

SCAG is contracting with a consultant to conduct a regional security needs assessment, to establish relationships between SCAG and local, regional and state security officials, and to help develop the Security Chapter of the next Regional Transportation Plan. In addition they will provide the Intelligent Transportation System (ITS) architecture for the region, with an emphasis on security.

METRANS Transportation Center

The Metrans Transportation Center, which is a joint partnership between the University of Southern California and California State University, Long Beach, is a US Department of Transportation University Transportation Center that was established in 1998 under the Transportation Equity Act for the 21st Century. The mission of Metrans is to 'solve transportation problems of large metropolitan regions through interdisciplinary research, education and outreach'. In doing so, Metrans conducts research in several areas relating to transportation; including safety, security, and vulnerability. Specifically, this study attempts to analyze safety and security issues such as pedestrian and transit safety; vulnerability of major infrastructure; and safety and risk mitigation.

[14] Government Accountability Office, Passenger Rail Security: Enhanced Federal Leadership Needed To Prioritize And Guide Security Efforts, Sept. 2005 at 10 (GAO-05-851), *available at* http://www.gao.gov/new.items/d05851.pdf.

Intelligent Transportation System

One way to incorporate safety and security into transportation planning is through greater collaboration between transportation planning and operations. Collaboration is particularly critical in metropolitan regions and congested corridors where numerous jurisdictions, agencies, and service providers are responsible for the safety, security, and efficient operation of various aspects of the transportation system. Not only are the roadway and transit system operators themselves dependent on the transportation system, but so are police, fire, and medical services; emergency response and domestic security systems; and port authorities.[15]

Collaboration enables regional strategic development of projects and policies that have regional effects on users; including activities such as incident management, advanced traveler information services, public safety/EMS/security, special events, electronic payment services, and performance measures.

Intelligent Transportation Systems (ITS) are one method of establishing a collaborative relationship. ITS projects were originally designed to increase transportation efficiency. It was recognized early on that ITS investments may also serve to enhance the safety, security and emergency response capabilities of the region. Such systems may be of assistance in the detection, response and recovery to human-made and natural disasters.

Because the successful operation of ITS projects usually depends upon coordination and communication between different agencies and the systems they operate, it is essential that there be a region-wide "framework for cooperation" to help achieve that coordination and communication in the most cost-effective manner. This framework is referred to as the Southern California Regional ITS Architecture. The Southern California Association of Governments (SCAG) has taken a leadership role in developing the Southern California Regional ITS Architecture for the region.

IV. Potential Role for SCAG

The events of 2001 have resulted in the reinvention of domestic security into the field of public policy. Consequently, many metropolitan areas in the country have begun to recognize the need for a regionally cooperative and collaborative approach in planning, preparation and response to both natural and human caused emergencies.

The increased emphasis on enhancing transportation security has also been reflected in the most recent transportation legislation, SAFETEA-LU, which authorizes Federal transportation funding for highways and transit projects for FY 2006-2010, and specifies that Metropolitan Planning Organizations (MPOs) shall conduct a metropolitan planning process that provides consideration for projects and strategies that will 'increase the security of the transportation system for motorized and non-motorized users'.

[15] http://www.tfhrc.gov/pubrds/04nov/02.htm

To determine SCAG's role in domestic security, a model developed by Dr. Michael D. Meyer, Georgia Institute of Technology, was applied. This model evaluates the potential role of a MPO in various phases of an incident or disaster. As identified by Dr. Meyer, policies that are developed to address security or disaster incidents should be comprised of the following six elements:

- *Prevention*: Stopping an attack before it occurs; improved facility design; surveillance, monitoring
- *Response/Mitigation*: Reducing impacts of an attack; evacuation; identifying best routes; effective communication system
- *Monitoring*: Monitoring and evaluating incidents; surveillance, monitoring, sensing, public information
- *Recovery*: Facilitating and reconstruction, restoring operation of transportation system
- *Investigation*: Determination of causes, and responsible parties; security/ police activity
- *Institutional Learning*: Self-assessment of actions; feedback to prevention element

As defined by the Association of Metropolitan Planning Organizations (AMPO), the roles of MPOs in regional planning vary from region to region and may include the following:

- *Traditional*: Maintaining ongoing systems management and operations of transportation planning activities. The primary responsibility for implementing projects rests elsewhere.
- *Convener*: Providing a forum where operational plans may be discussed and coordinated with other plans in the region. The responsibility of implementation is left to the associated jurisdictions.
- *Champion*: Developing regional consensus on operations planning. MPO planners develop programs and projects, and take the lead in developing regional agreements on coordinated operations.
- *Developer*: Developing regional operation plans and incorporating operations strategies into the transportation plan. System-oriented performance measures would be used to identify strategic operations gaps in the transportation system.
- *Operator*: Implementing operations strategies that were developed as part of the MPO-led planning process.

SCAG, as both a metropolitan planning organization and as a transportation planning agency, may play a lead role in some areas, a minor role in others, or play no role at all depending on the circumstances. For example, SCAG, as a planning agency has no role in the operational aspect of security; but can have a minor role as champion in the recovery phase; and may have a lead role in championing and convening prevention and developing institutional learning.

The following table illustrates the potential roles of a MPO in regards to various phases of an incident; based on its type and function. According to the table below, SCAG is best suited to play the role of Convener and Champion because of its traditional role as the MPO for the six-county Southern California region. This role would include the provision of forums where plans and data may be developed and coordinated with other regional planning efforts; and the development of regional consensus. However the responsibility of operating and implementing

plans and programs remains with the local jurisdictions as SCAG, in its role as a planning organization, has no operational or implementation authority.

	Possible MPO Role				
Incident Phase	**Traditional Role**	**Convener**	**Champion**	**Developer**	**Operator**
Prevention	●	☑	☑	●	☒
Response/Mitigation	●	☑	☑	●	●
Monitoring/ Information	●	☑	☑	●	☒
Recovery	●	☑	●	☒	☒
Investigation	●	☒	☒	☒	☒
Institutional Learning	☑	☑	☑	☑	☑

Not likely Role ☒ **Minor Role** ● **Lead Role** ☑

The potential role as Convener and Champion do not imply that SCAG should abdicate its mandated transportation planning functions as a result of a terrorist attack, human-made or natural disasters. Since SCAG does not play a role in implementation, and numerous organizations have already been established for security planning and response purposes, the key goal for SCAG, in its role as an MPO, is to provide support for existing activities and to enhance security planning.

A number of emergency preparedness and response plans have been put in place for the SCAG region; with its history of earthquakes, wildfires, flooding and mudslides. However, no plan can encompass every possible circumstance. It is inevitable that a situation will arise and overwhelm the existing local or regional plans and resources. In such an event, coordination and resources is expected to eventually come from the State and Federal government[16].

SCAG's Transportation Security Study is intended to determine what role SCAG, as a Transportation Planning Agency and Metropolitan Planning Organization, will play to enhance

[16] The largest threat to the region, an earthquake, would provide no advance warning to allow for the staging of recovery material, which would delay relief efforts, depending on the scale of the damage.

and provide support to local, state and federal security and emergency responders; and how that role may be used to benefit the entire region.

Potential Goals/Policies/Objectives

Goals are the end results of directed efforts and are expressed in general terms that are timeless. Policies are direction statements that guide future decisions with specific actions. Objectives are the desired results for a specific point in time.

The over-arching goal for SCAG may include the amendment of the following SCAG goal to encompass security:

- Ensure ~~travel~~ **transportation** safety, **security** and reliability for all people and goods in the region.

Another over-arching goal for SCAG may include:

- Help prevent, protect, respond to, and recover from major human-caused or natural events in order to minimize the threat and impact to lives, property, the transportation network and the regional economy.

One of the policies within these goals may suggest to *"Continue to deploy and promote the use of intelligent transportation system technologies that enhance transportation security."*

Under that policy, may be the objective to *"map emergency management connectivity/de facto architectures."*

The action step under the objective may *"incorporate security into the Regional ITS Architecture by 2008."*

Although the Security Study is not yet complete, preliminary research has developed **potential** security and emergency preparedness policies, objectives and action plans. These are listed on page 18.

	Policies	Objectives	Actions
1	**Ensure the rapid repair of transportation infrastructure in the event of an emergency**	• SCAG will work with local, state and federal agencies to ensure the rapid repair of transportation infrastructure in the event of an emergency	• Identify, in cooperation with local and state agencies, critical infrastructure areas necessary for a) emergency responders to enter the region, b) the evacuation of affected areas, and c) the restoration of utilities • Develop, in cooperation with CTCs, State and Federal Government, a transportation recovery plan for the awarding of contracts to rapidly and efficiently repair damaged infrastructure during an emergency
2	**Continue to deploy and promote the use of Intelligent Transportation System (ITS) technologies that enhance transportation security**	• SCAG should expand the use of ITS to improve surveillance, monitoring and distress notification systems and to assist in the rapid evacuation of disaster areas • SCAG will map emergency management connectivity/de facto architectures	• SCAG should increase funding for ITS projects that enhance or benefit transportation security • SCAG shall incorporate security into the Regional ITS Architecture by 2008
3	**Establish transportation infrastructure practices that promote/enhance security**	• SCAG should work with transportation operators to plan and coordinate transportation projects, as appropriate, with Department of Homeland Security grant projects, to enhance the Regional Transit Security Strategy (RTSS) • SCAG should establish transportation infrastructure practices that identify and prioritize the design, retrofit, hardening, and stabilization of critical transportation infrastructure to prevent failure, minimize loss of life and property, injuries, and avoid long term economic disruption	• SCAG should establish a Transportation Security Working Group (TSWG) with goals that are consistent with the RTP and RTSS; and to find ways that SCAG programs may enhance RTSS • SCAG should identify a goal of the TSWG to educate local transportation agencies to incorporate security into the design, aesthetics, construction and repair of transportation facilities
4	**Establish a forum where policy makers may be educated and regional policies can be developed**	• SCAG shall work with local officials to develop regional consensus on regional transportation safety, security, and safety-security policies	• SCAG should identify a goal of the TSWG to provide input, and to allow individuals to provide input, to Policy Committees

	Policies	Objectives	Actions
5	**Enhance the Region's ability to deter and respond to acts of terrorist attacks, human-made or natural disasters through regionally cooperative and collaborative strategies**	• SCAG shall work with local officials to develop regional consensus on regional transportation safety, security, and safety-security policies • SCAG shall encourage all SCAG elected officials are educated in National Incident Management System (NIMS) • SCAG should work with partner agencies, federal, state and local jurisdictions to improve communications and interoperability and to find opportunities to leverage and effectively utilize transportation and public safety/security resources in support of this effort	• SCAG should identify a goal of the TSWG to provide recommendations to Policy Committees concerning safety, security, and safety-security policies.. • SCAG shall provide approved NIMS training materials to SCAG elected officials • SCAG should provide training workshops and testing materials with a goal of 100% completion • Utilize TSWG as a tool to identify and fund transportation projects that can enhance security
6	**Enhance emergency preparedness among agencies and the public**	• SCAG shall work with local officials to develop regional consensus on regional transportation safety, security, and safety-security policies	• SCAG should identify a goal of the TSWG to provide recommendations to Policy Committees concerning emergency preparedness policies..
7	**Improve the effectiveness of regional plans by maximizing the sharing and coordination of resources**	• SCAG shall encourage and provide a forum for local jurisdictions to develop mutual aid agreements for essential government services during incident recovery	• Mutual Aid Agreements between neighboring communities/counties • Mutual Aid Agreements between neighboring regions in the event of catastrophic events
8	**Enhance the capabilities of local and regional organizations including first responders through provision and sharing of information**	• SCAG shall work with local agencies to collect regional GeoData in a common format, and provide access to the GeoData for emergency planning, training and response • SCAG shall establish a forum for cooperation and coordination of these plans and programs among the	• SCAG should become a regional repository of GIS data for use by local agencies in emergency planning, and response, in a standardized format • Establish a Transportation Security Working Group (TSWG) to provide input to Policy Committees (modeled after Aviation

	Policies	Objectives	Actions
		regional partners including first responders and operations agencies • SCAG should develop and establish a regional information sharing strategy, linking SCAG and its member jurisdictions for ongoing sharing and provision of information pertaining to the region's transportation system and other critical infrastructure	Technical Advisory Committee) • SCAG should become a regional repository of GIS data for use by local agencies in emergency planning, and response, in a standardized format
9	**Provide the means for collaboration in planning, communication and information sharing before, during, or after a regional emergency for the region**	• SCAG should develop and incorporate strategies and actions pertaining to response and prevention of security incidents and events as part of the ongoing regional planning activities	• SCAG should become a regional repository of GIS data for use by local agencies in emergency planning, and response, in a standardized format

Conclusions

This paper has provided a brief overview of security and emergency response preparations for the region's transportation system.

This chapter is by no means an exhaustive effort delineating every effort at every level. It has identified the roles of security and emergency preparedness among the various agencies and jurisdictions in the SCAG region. ıt recognizes the limitations of SCAG, as a MPO, within the framework of the existing security and response structures. It also recognizes areas where SCAG, as a MPO, can provide integration of security into the transportation planning process, provide benefit to existing security providers, provide education to local officials, and provide regional consensus on security planning and disaster response.

California, through hard experience, has in place an emergency and response structure designed to be innovative to the different locations and types of emergency. With the rise in terrorism directed against the United States, a newer threat has emerged. While the operational security preparations are beyond the role of SCAG, there is a role for SCAG in the rapid repair of damaged infrastructure, developing regional consensus on emergency response policies, finding ways to leverage transportation dollars to enhance regional security measures.

The policies recommended in this chapter are designed to engage the various agencies and jurisdictions, encouraging teamwork, avoiding overlap, duplicating efforts or competing for scarce federal emergency preparedness funds.